ENIGMA IP2

Monitoring Receiver

(and IP receiver card)

Programming Manual

6 / 11 / 2014

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1. INTRODUCTION

Thank you for choosing our product. This modern and reliable monitoring receiver not only guarantees the highest level of **security**, but also it is a useful colleague in the life of every monitoring company, because of its **user-friendly** handling and **intelligent functions**.

To use the highest range of provided functions **please read** carefully the *Installer Manual*.

For the confident programming and secure usage please keep all warnings in *Installer Manual*, with highly focusing to security directions.

Note: If you use this unit as an IP receiver card, please use the manual of Enigma II receiver.

2. SYSTEM STRUCTURE

The Enigma IP2 monitoring receiver is ideal and cost-effective solution to build-up a monitoring station, where transmission is sent only through IP / GPRS channel. Device has compact size and excellent parameter setting possibilities. The incoming IP communication might be monitored according to client accounts. It provides prominent protection level for the reliable and secure operation. The card version device can be be built into the Enigma II base unit. With combination of a suitable monitoring software it guarantees not only reliable signal transmission, but also easy to use operator interface.

3. FIRST STEPS

Please unpack the device carefully and please check is there any damage on that caused by transport. If there is any obvious damage do not switch on the device, please call the distributor. The basic package contains the following units:

- ENIGMA IP2 monitoring receiver
- USB cable for PC connection
- 12 VDC power supply set
- Installer Manual

Before mounting the device to its operation environment, receiver test is recommended.

Connectors and LED signals

There are the following connectors on the backside of the receiver:
Power supply connector: 12 VDC power supply connector (always use the original power supply unit provided by manufacturer).
Note: In case of the failure of main power supply unit, the device is able to operate with power received through USB cable (if USB current is suitable). But long term usage without main power supply unit is not recommended.
Ethernet connector: 100 Mbit Ethernet connector for network cable.
Mini USB connector: To connect of the USB port of monitoring PC (serial comm).
RS232 connector (only in newer version IP2 receiver): To connect to monitoring PC (serial communication).

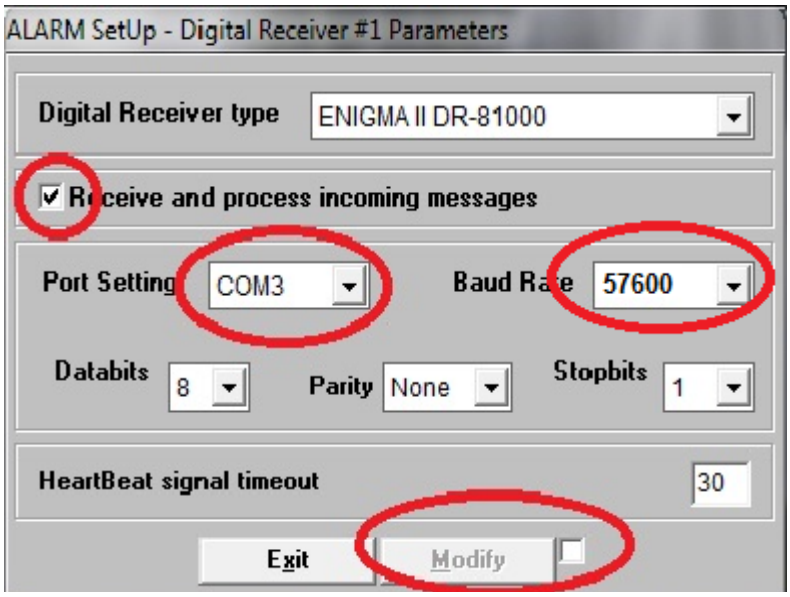
There are the following connectors on the front side of the receiver:
POWER LED: It lights in blue if device is ready to use.
IP LINK LED: It lights green if there is connected network. There is slow red flashings if network cable is unplugged. Quick red flashings mean received events.
Note: If buzzer is enabled, it sounds with short signals (about 2 beep / sec frequency) if the network connection is unplugged.
PC LINK LED: It lights green if there is serial connection (USB) with monitoring software. If there is no connection with monitoring software, this LED is off.
Note: If buzzer is enabled, it sounds with short signals (about 4 beep / sec frequency) if the connection with monitoring software is failed.
RECEIVER EVENT LED: Amber led flashing means if there is received event through IP network.
RECEIVER TROUBLE LED: Slow red flashings show the receiver errors (such as power supply error, monitoring software connection error, IP network error).

Note: The buzzer (if enabled) is continuously active during programming. IP LINK, RECEIVER EVENT and RECEIVER TROUBLE leds are blinking during programming.

4. SYSTEM PROGRAMMING WITH PC SOFTWARE

To use the monitoring receiver with monitoring PC connect the mini USB port of receiver to the USB port of the monitoring PC. Driver installation is automatic (from Windows 7). After this the appropriate monitoring software settings should be done (it means usually the serial port and baud rate settings).

The process is the following in *AlarmSyS* monitoring software:
Start *Alarm Start* software → Start *Alarm Setup* and log in (ID: 1, Password: 1) → Setup menu → Hardware Setup → Digital Receiver #1.

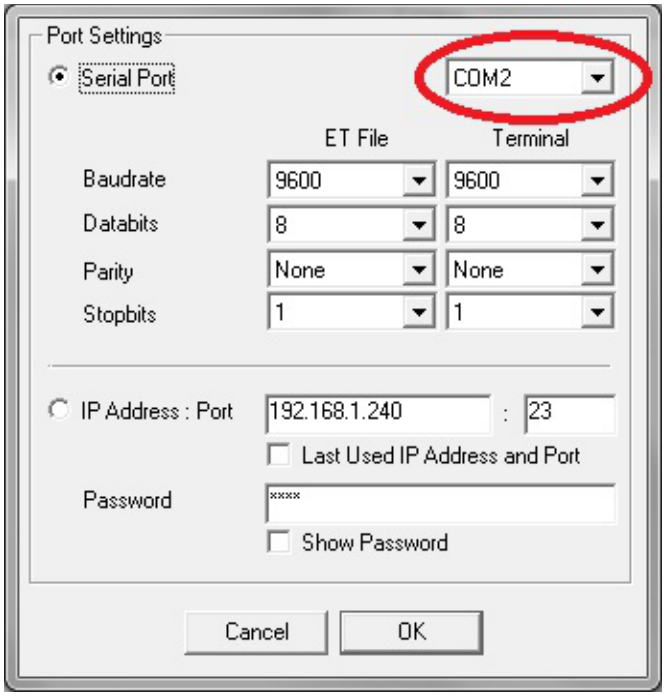


In pop-up window basically only *Receive and process incoming messages* option should be enabled, then set the proper *COM port* (checking in Windows OS: *Control Panel* / *Hardware* / *Device Manager*) and *Baud Rate* to 57600, then apply changes. After this receiver events are displayed on monitoring software screen.

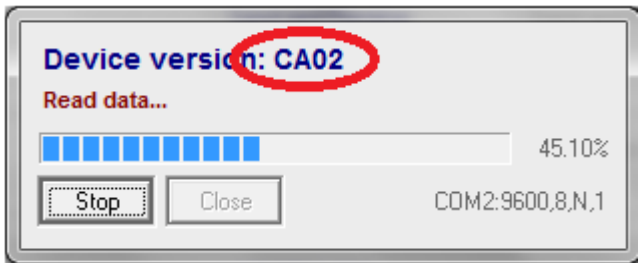
Note: To connect IP2 card to monitoring software set Baud Rate value to 57600 in monitoring software settings.

In normal case programming of the monitoring receiver unit can be done through USB (serial) port. After completing appropriate IP settings programming can be done through Ethernet network as well. Please use *EniTerm* software for programming. The programming steps are bellow:

1. Please start *EniTerm* software.
2. Choose the ET (settings) file according to the device what you want to program:
   - IP.et – IP2 Ethernet receiver card programming
3. In Communication / Port Settings menu set the communication port / IP address for programming.



4. With *Communication* / *Read Data* menu you can read stored settings from receiver.



The highlighted firmware version means the following (hexadecimal format):

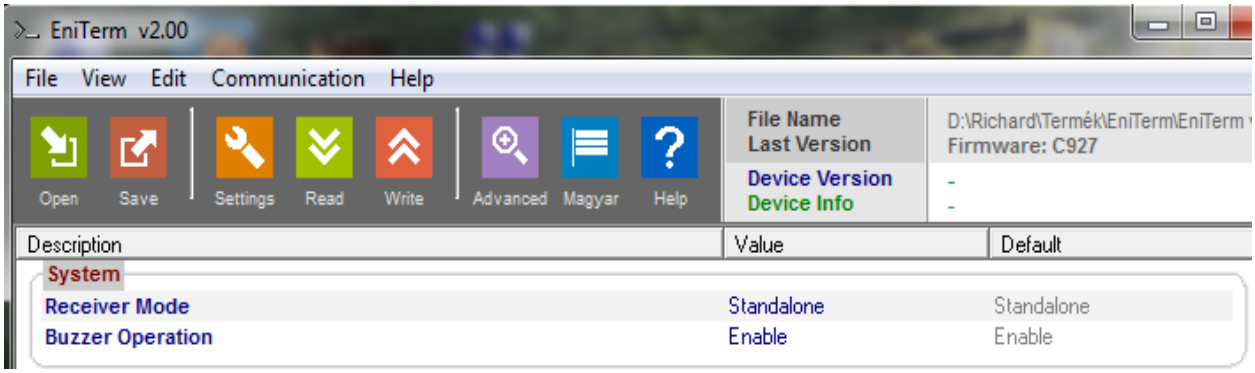
C – 12 (2012)

A – 10 (October)

02 – 2 (Second day)

5. Please execute the required settings in *EniTerm* software.

Note: The software functions are shown in *EniTerm* help menu.



6. Click to *Communication* / *Write Data* menu to send the modified settings to receiver.

Note: During data reading (and sending) receiver firmware version can be checked.

5. TROUBLESHOOTING

TROUBLE: Any abnormal operation in functions during the usage of the device.

SOLUTION: Firmware upgrade with the newest firmware file usually solve these kind of problems (see *Firmware update* part in manual).

TROUBLE: No connection between monitoring PC and receiver unit.

SOLUTION: Check the cable plugging in PC side and in receiver side as well. In monitoring PC *Control Panel* / *Hardware* / *Device Manager* application you can check which COM port appears / disappears in device list during plug / unplug ENIGMA IP2 cable. Please check whether COM port setting is correct in monitoring software. Baud rate should be set to 57600 in monitoring software settings.

TROUBLE: After proper IP configuration receiver events are not coming through IP.

SOLUTION: Don't forget to allow used ports in rooter (Port forward menu in rooter).

TROUBLE: There are strange internal messages in receiver with 0000 client account.

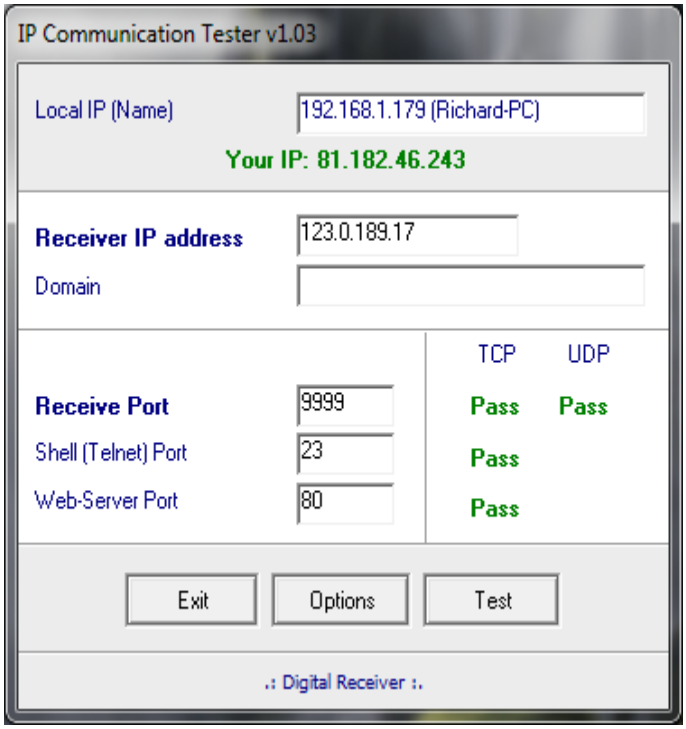
SOLUTION: It is possible that any of the external device (alarm control panel) has 0000 client account. Never use 0000 client account in alarm control panel side.

TROUBLE: The receiver unit freezes because of any external reason.

SOLUTION: Unplug power supply cable and USB cable at the same time, then plug it back. It means hardware reset of the receiver.

6. ENIGMA IP2 TESTING

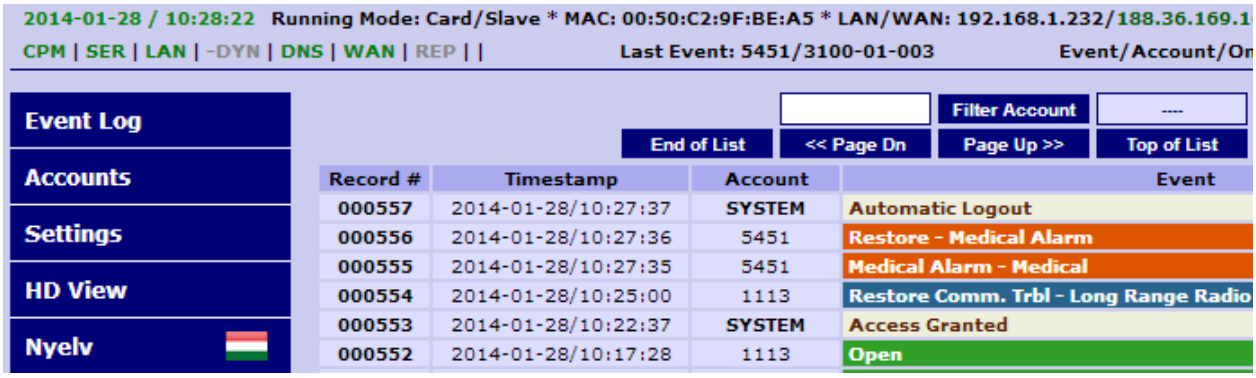
When all setting is finished it is possible to test ENIGMA IP2 unit. Testing is also useful to test data sending from an external installation place. The testing software in the given local network can help a lot to check monitoring transmission and find the reason of possible problems. For test please use ipt.exe software in the following way:



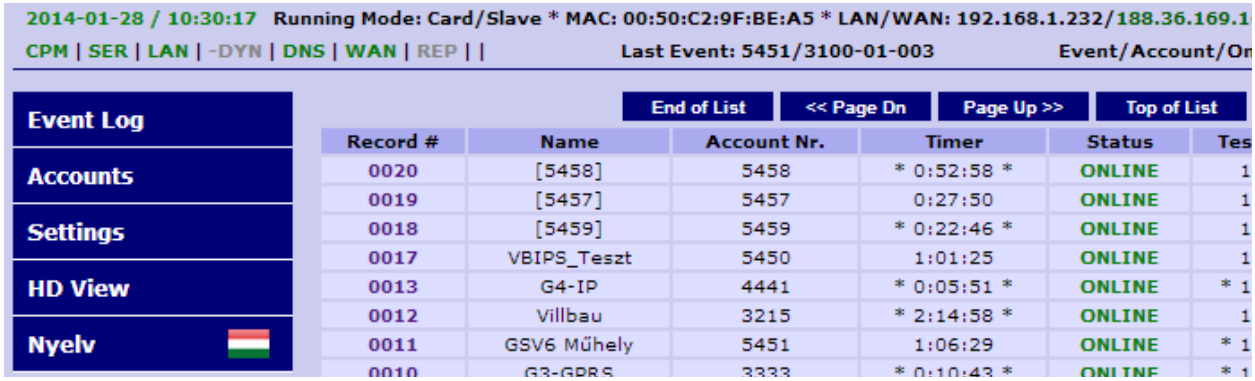
1. Enter the *IP address* or *Domain name* of the monitoring station.
2. Set the ports for communication with monitoring station (*Receive Port* = Monitoring transmission port; *Shell (Telnet) Port* = Remote programming port; *Web Server Port* = Event list access through web browser port).
3. After click to Test button it can be seen that test is successful (PASS) or not (FAIL).
4. If you want you can change the program settings in *Options* part:
   - *Enable TCP Test Report* = TCP connection test with test message;
   - *Enable UDP Test Report* = UDP connection with test message;
   - *Invisible TCP/UDP Test* = Test message can't be seen on receiver;
   - *Enable AES Crypted Test Report* / *AES Key* = Test of AES encryption function.

Received events in Enigma IP2 can be checked easily with a simple web browser access. For this IP address (and port if it is different from 80) of Enigma IP2 unit should be typed in a web browser (Internet Explorer recommended). Then receiver HTTP page can be seen.

Note: For the operation of event list review through web browser the IP ADDRESS and HTTP PORT should be enabled in rooter as well.



In *Accounts* menu you can check the accounts for IP monitoring (if enabled). Additionally you can set individual communication monitoring settings for each user.



Event Log – Display list of received events.

Accounts – IP communication monitoring status check. Monitoring period, test code monitoring, encryption might be configured individually for each user.

Settings – Generally used settings such as: date/time settings, event list export, account list import/export, logo upload, web data file upload (after firmware upgrade).

Note: Default password to access settings menu: 1234.

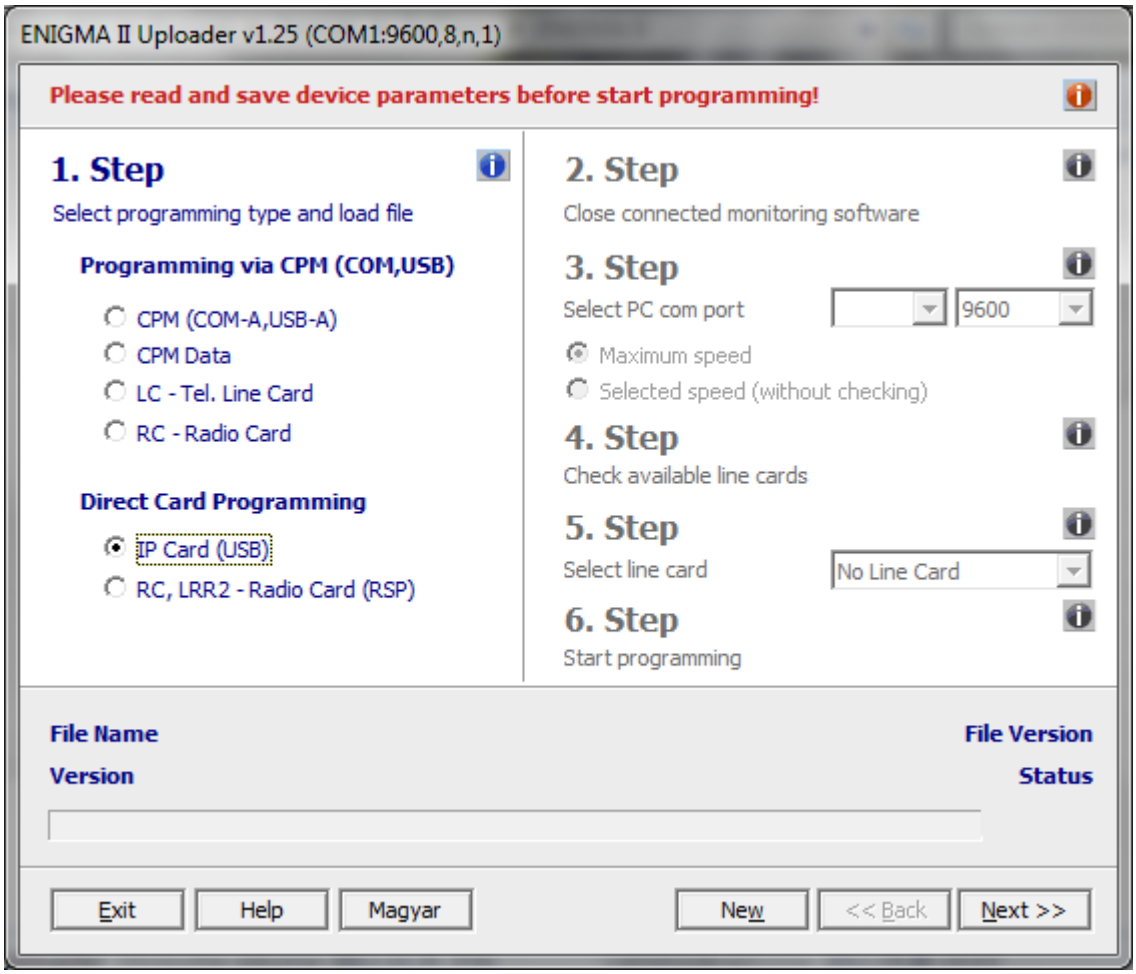
HD View – To better display in wide screen monitor, more parameters.

7. FIRMWARE UPGRADE AND OTHER FUNCTIONS

It is recommended to upgrade regularly firmware of the unit to use new functions and eliminate possible bugs.

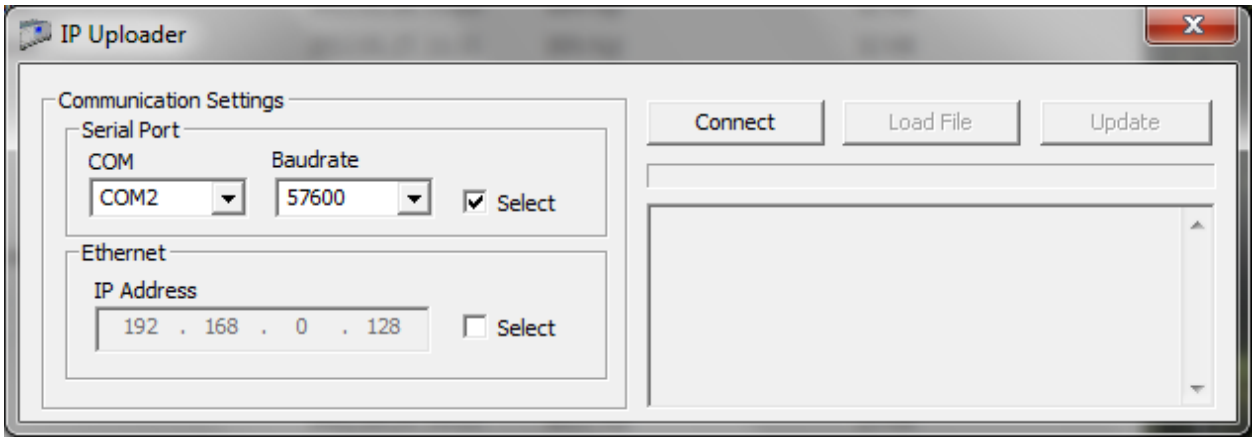
Firmware upgrade can be done by the following steps:

1. Get the latest firmware files from your distributor (ip.ipx file).
2. Save settings from the IP card planned to update with *EniTerm* software (please check *4. System programming with PC software* chapter). Please close monitoring software if it is running.
3. Start *Enigma II Uploader* program for firmware upgrade.



4. Choose item *IP Card* for upgrade (1. STEP), then NEXT.

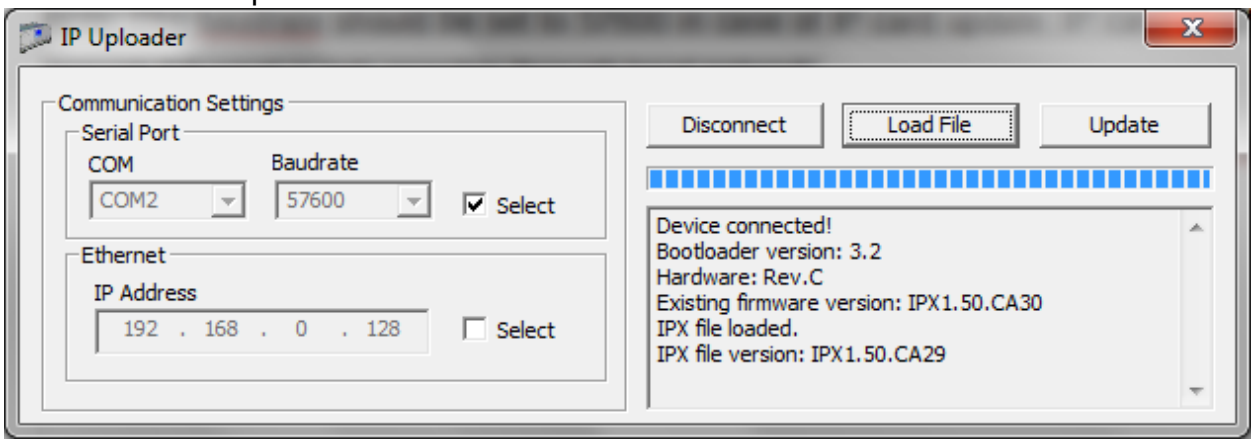
5. The following window will pop up if you use *IP Card* update.



6. Choose the COM port where IP card is connected.

Note: The baudrate should be set to 57600 in case of IP card update. IP card update through Ethernet is only possible through local network.

7. After clicking to *Connect* menu, then *Load File* menu you should select ip.ipx firmware file for update.



8. Upgrade process can be started with *Update* button. Click To *Disconnect* button at the end of update proccess.

9. Do not forget to send back the saved IP card settings at the end of the upgrade (please check *4. System programming with PC software* chapter).

10. To use new functions it might be required to get the latest *EniTerm* software with the newest ET (setup) files – please download and use newest version.

Web browser menu of IP card can only be uploaded on the web browser site of IP card. Upload is possible in *Data Upload* menu. If the web browser site cannot be uploaded from any reason, you can use IP address then /mpfsupload command for data upload (for example: 192.168.1.232/mpfsupload) of ip.bin file. Default upload password: 1234.

8. SYSTEM MESSAGES

System Message	Code	Description
DATAFILE MODIFY	B1	IP receiver card web browser data file modified
SETTING MODIFY	B2	IP receiver card settings changed
PROGRAM MODE	B3	IP receiver card programming through serial port / IP network
PROGRAM END	B4	IP receiver card programming through serial port / IP network end
COM ERROR	B5	IP receiver card communication error on USB port (with monitoring software)
COM RESTORED	B6	IP receiver card communication restore on USB port (with monitoring software)
TCP/IP ERROR	B7	IP receiver card TCP/IP network error
TCP/IP RESTORED	B8	IP receiver card TCP/IP network restored
TIME/DATE SET	B9	IP receiver card date and time set
FIRMWARE UPDATE	B0	IP receiver card firmware updated
LAN ERROR	BB	IP receiver internal LAN connection (gateway) test failed
LAN RESTORED	BC	IP receiver internal LAN connection (gateway) test OK
RECEIVER RESET	BD	IP receiver card restarted
IP WAN ERROR	BE	IP receiver external WAN connection test failed
IP WAN RESTORE	BF	IP receiver external WAN connection test OK
BATTERY ERROR	11	Receiver internal battery voltage error
BATTERY OK	12	Receiver internal battery voltage restore
RECEIVER STOP	19	Receiver shutdown before planned restart
REC. OVERHEAT	33	Receiver overheat event
IPFORW ERROR	51	Communication error in IP event forwarding
IPFORW OK	52	Communication restore in IP event forwarding
CPM COMM ERROR	53	Communication trouble with receiver CPM bus
CPM COMM OK	54	Communication restore with receiver CPM bus
IPSERVER STOP	57	IP receiving server stop in receiver
IPSERVER START	58	IP receiving server start in receiver
AC ERROR	81	AC error in receiver power supply
AC RESTORE	82	AC restore in receiver power supply
IP ERROR	1692	There is no IP communication from the given client account within the defined time range (comm. lost)

IP RESTORE	3692	IP communication restored for the given client account where communication was lost
	Z0	The given client account was deleted on web browser
	Z9	The given account was modified on web browser

Note.: System messages are sent with 0000 client account (except IP ERROR / IP RESTORE messages, which are sent with the given client account where IP communication was lost).

9. COMPATIBILITY

ENIGMA IP2 receiver is compatible with the following communicators and monitoring software types:

Monitoring software

- ALARM SYS (recommended)
- SIMS
- MYMAS

SURGARD receiver should be chosen in case of SIMS, MYMAS or other monitoring software types.

IP communicators

- VILLBAU VBIP, VBIP PRO, VBIP-G
- SECOLink LAN800

GPRS communicators

- VILLBAU VBIP-G
- SECOLink GSV2, GSV6
- SECOLink GSV3, GSV4M
- TELL ecoLINE SIA
- WM M2M Easy Communicator
- ELDES ESIM364
- ELDES ET082

10. TECHNICAL DATA

Product	**ENIGMA IP2**
Power supply	12 Vdc @ 500 mA
Maximum current consumption	about 250 mA
Event buffer	up to 20.000 events
Monitored IP devices	up to 2.500 accounts
Ethernet connector	100 Mbit
Operating temperature	10 °C / +30 °C 40% relative humidity
Sizes (W / L / H)	110 x 190 x 35 mm
Weight	300 g